

Amendments to and Listing of the Claims:

Please amend claims 1, 4, 6 and 7 so that the claims read as follows:

1. (currently amended) A method of fabricating a probe including a cantilever, a body supporting said cantilever and a tip formed at an end of the cantilever, comprising the steps of:

(a) providing a silicon substrate having $\langle 110 \rangle$ directional crystal structure as a starting wafer, wherein the substrate has an upper surface and a lower surface;

(b) forming a first mask layer on ~~an area of~~ the upper and lower surfaces of the silicon substrate ~~to be formed with the body and the tip;~~

(c) coating a first photoresist on the first mask layer on the upper surface of the silicon substrate and patterning the photoresist to leave only portions of the first photoresist defining the tip and the body;

(d) etching the silicon substrate using the remaining first photoresist as a mask to remove portions of the first mask layer;

(e) removing the remaining first photoresist;

(f) etching the silicon substrate in a predetermined depth using the first mask layer remaining on the upper surface of the silicon substrate as a mask to form the tip;

(g) removing the remaining first mask layer;

(h) ~~and~~ forming a second mask layer on an area of the silicon substrate except for an area to be formed with the body and the cantilever;

(i) forming a boron-diffused layer by diffusing boron into the silicon substrate ~~an area to be formed with the cantilever and a predetermined area of the body~~ using the second mask layer as a mask so that the boron is diffused only into a portion of the silicon substrate to be formed with the cantilever and the body;

(j) removing the second mask layer;

(k) ~~and~~ forming a third mask layer on ~~the boron-diffused layer; and~~ the upper and lower surfaces of the silicon substrate;

(l) coating a second photoresist on the third mask layer on the upper surface of the silicon substrate and patterning the photoresist to cover only portions of the second photoresist to be formed with the cantilever and the body;

(m) etching the silicon substrate using the remaining second photoresist as a mask to remove portions of the third mask layer;

(n) removing the remaining second photoresist and third mask layer on the lower surface of the substrate; and

(o) performing an anisotropic etching of the silicon substrate in a vertical direction from a masked surface of the substrate using the third mask layer remaining on the upper surface of the silicon substrate as a mask so that the silicon substrate is etched in a vertical direction from the upper and lower surfaces of the substrate, to form thereby forming the body and the cantilever.

2. (canceled)

3. (original) The method of fabricating a probe according to claim 1, wherein the first, second and third mask layers are a silicon dioxide.

4. (currently amended) The method of fabricating a probe according to claim 1, wherein [[the]] step (f) of etching the silicon substrate to form the tip is performed by a reactive ion etching process using SbF_6 , He and O_2 gases.

5. (original) The method of fabricating a probe according to claim 4, wherein a sharpness of the tip is adjusted by varying a process condition of a constitution ratio of the gases, a power, or a pressure during the reactive ion etching process.

6. (withdrawn-currently amended) The method of fabricating a probe according to claim 1, wherein [[the]] step (i) of forming the boron-diffused layer comprises steps of ion-implanting the boron and diffusing the boron by a heat treatment.

7. (withdrawn-currently amended) The method of fabricating a probe according to claim 1, wherein [[the]] step (i) of forming the boron-diffused layer comprises a step of diffusing the boron by a heat treatment using a solid source containing the boron.

8. (withdrawn) The method of fabricating a probe according to claim 6, wherein a thickness of the boron-diffused layer is determined by a temperature during the heat treatment and a time of diffusing the boron.

9. (withdrawn) The method of fabricating a probe according to claim 7, wherein a thickness of the boron-diffused layer is determined by a temperature during the heat treatment and a time of diffusing the boron.

10. (canceled)

11. (previously presented) The method of fabricating a probe according to claim 1, wherein the boron-diffused layer serves as an etching-stopper layer during the anisotropic etching.

12. (previously presented) The method of fabricating a probe according to claim 1, wherein the anisotropic etching of the silicon substrate is performed by using an etchant selected from the group consisting of ethylene diamine pyrocathecol, tetramethyl ammonium hydroxide and potassium hydroxide.